



Neema's Birthday

Activity Sheet for Students

letsread.asia/NeemasBirthday



Neema is really happy because her birthday has finally come after waiting for four years.



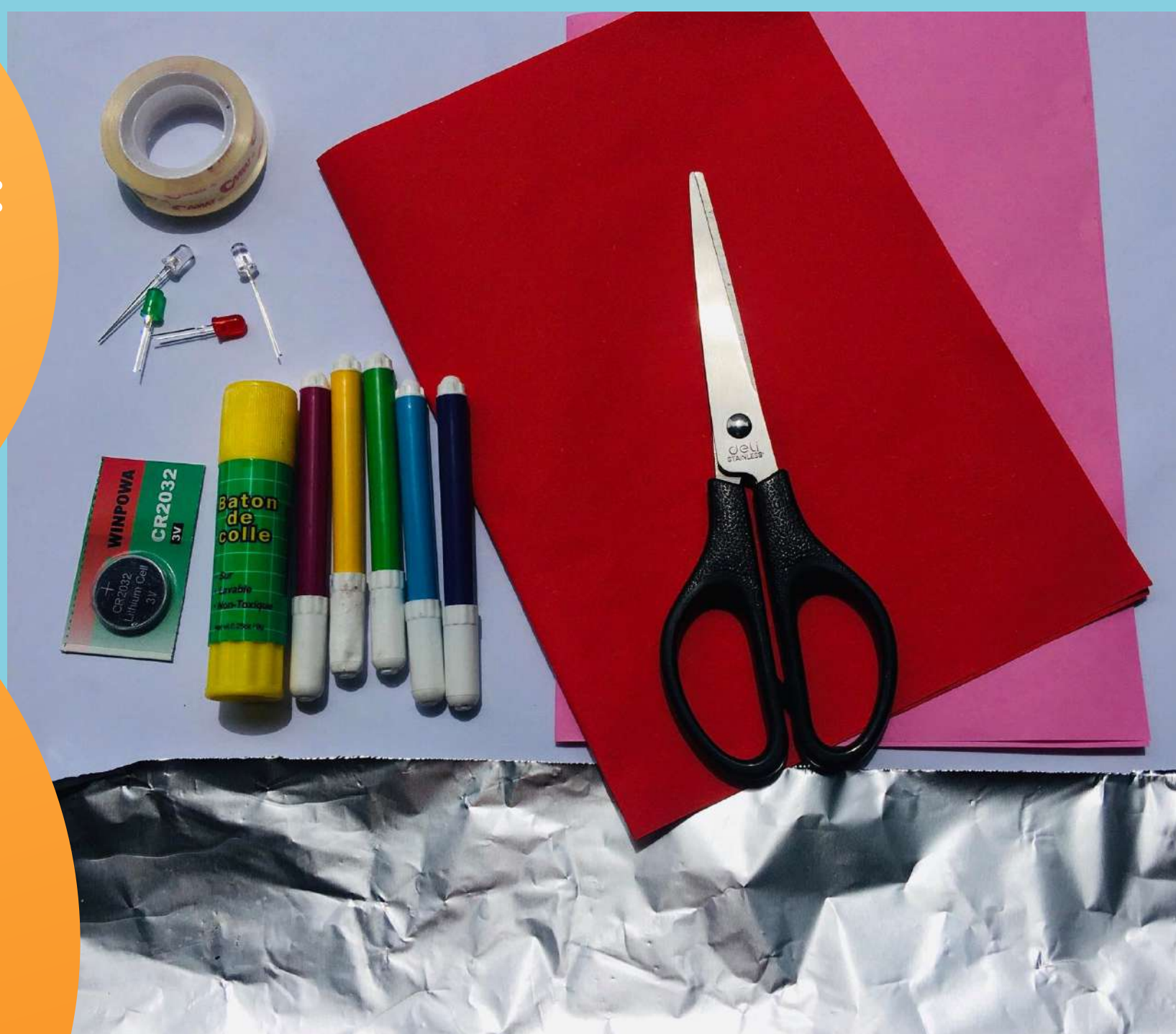
How often do you celebrate your birthday? Do you know why Neema's birthday comes once every four years?

It is because she was born on the 29th of February in a leap year. Leap year is a year in which the month February has 29 days. Do you know how many days February has in other years?

Since Neema's birthday only comes once every four years, they have a big celebration at her house for her birthday. Let's make a special birthday card for Neema so we can make her feel special on her birthday. Have you ever seen a card that plays music when you open it? Today we will make a card with a bulb that glows.

Before we start making, Make sure to have these:

1. Colorful A4 Paper
2. Fevicol / Glue stick
3. Tape
4. Sketch pens
5. Scissor
6. LED Lights
7. Aluminium Foil
8. Coin cell battery (3v)





Let's make a birthday card with lights



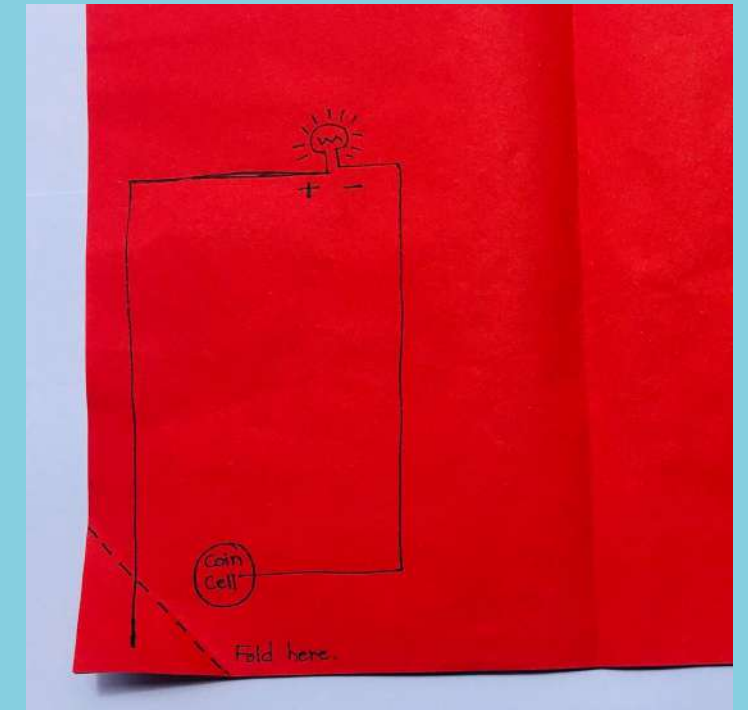
Step 1

Take a colourful A4 paper and fold it in half.



Step 2

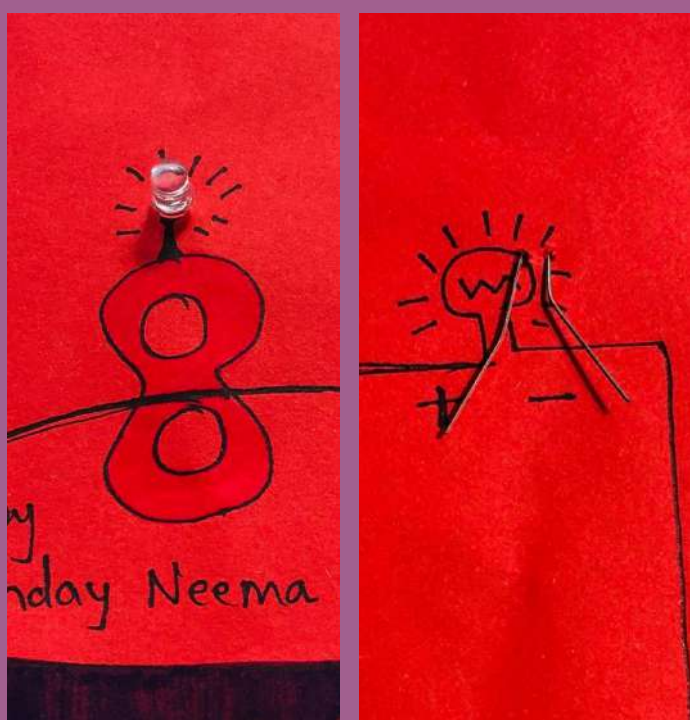
Draw a cake with a candle on the front face of the folded paper.



Step 3

Inside the paper, draw a circuit with a bulb and a coin cell like shown in the picture above.

Make sure the bulb is directly behind the flame of the candle on the first page.



Step 4

Take an LED bulb and insert the legs from the front of the paper to the back. Now fold the longer leg so it touches the line on the positive(+) side and the shorter leg on the negative(-) side. Make sure the legs don't touch each other.



Step 5

Take some aluminium foil and cut it into long and thin strips.



Step 6

Using tape or glue, stick the aluminium foil on the lines of the circuit from step 3. Make sure the legs of the LED touch the foil strips nicely.





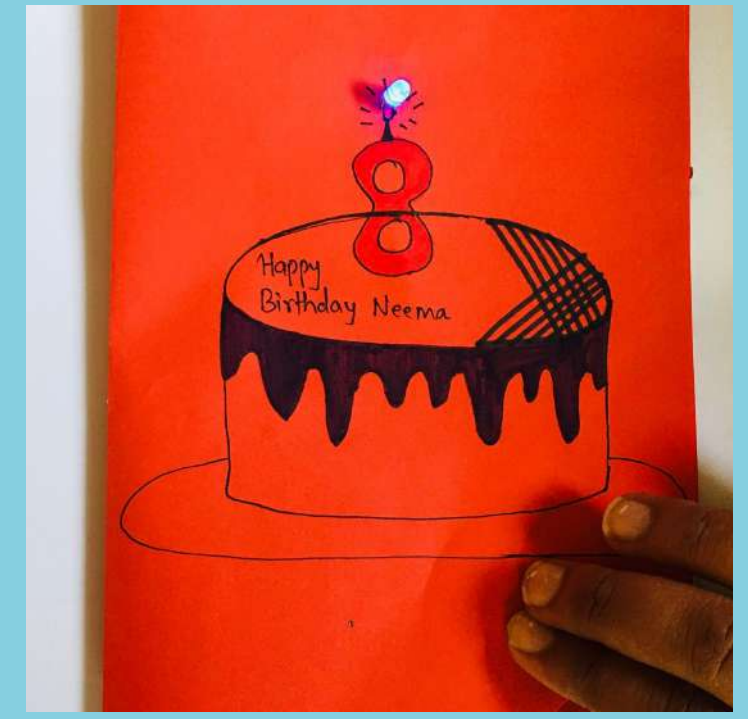
Step 7

Stick a piece of double sided tape on top of the picture of the coin cell and stick the end of the aluminium strip on top.



Step 8

Take a coin cell and stick it on top of the tape. Fold the end of the paper with the aluminium strip inwards from the folding line. After you fold, your aluminium strip should just touch the coin cell.



Step 9

Close your card, and press where the coin cell is. Your bulb should glow. If it doesn't glow, open the card, flip the coin cell and stick it and try again.

Challenge Your Skills

1. Can you make a different circuit so that the bulb glows when you open the card?
2. Add more elements to the card. For example, make the card pop up when you open it.

Challenge Your Mind

1. What will happen if you use plastic strips instead of the aluminium strips? Explain why.
2. If your bulb doesn't glow in step 9, you have to flip the coin cell. Why do you have to do that?





Neema's Birthday

Worksheet



Leap year comes every four years. Use the sheet below to note down the upcoming leap years.



2012 was a leap year.
 2016 was a leap year.
 2020 is a leap year.
 _____ is a leap year.
 _____ is a leap year.
 _____ is a leap year.
 _____ is a leap year.
 _____ is a leap year.
 _____ is a leap year.
 _____ is a leap year.
 _____ is a leap year.
 _____ is a leap year.

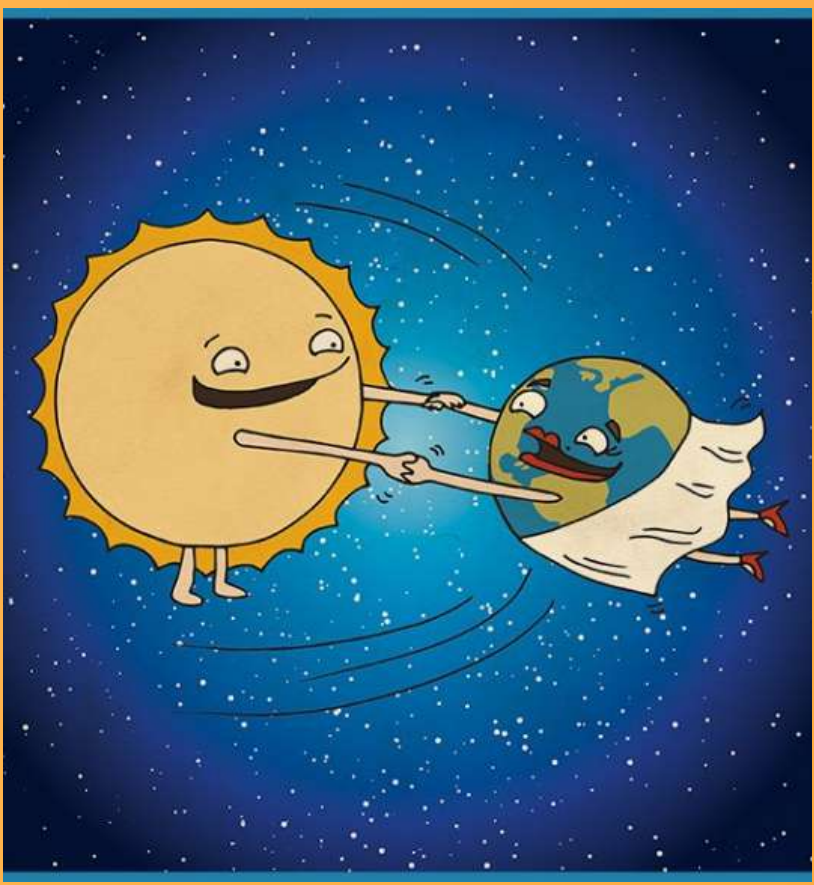


Q. Can you think of a way to find out if a year is a leap year or not?

Neema's Birthday

HANDOUT

LEAP YEAR



Do you know how many days there are in a year? You must have heard that a year has 365 days. It is the number of days the earth takes to go around the sun.

Actually, every year, the earth takes 365 days and 6 hours to go around the sun. Over the years, the extra hours get added up and the calendars can be wrong if they don't fix it.

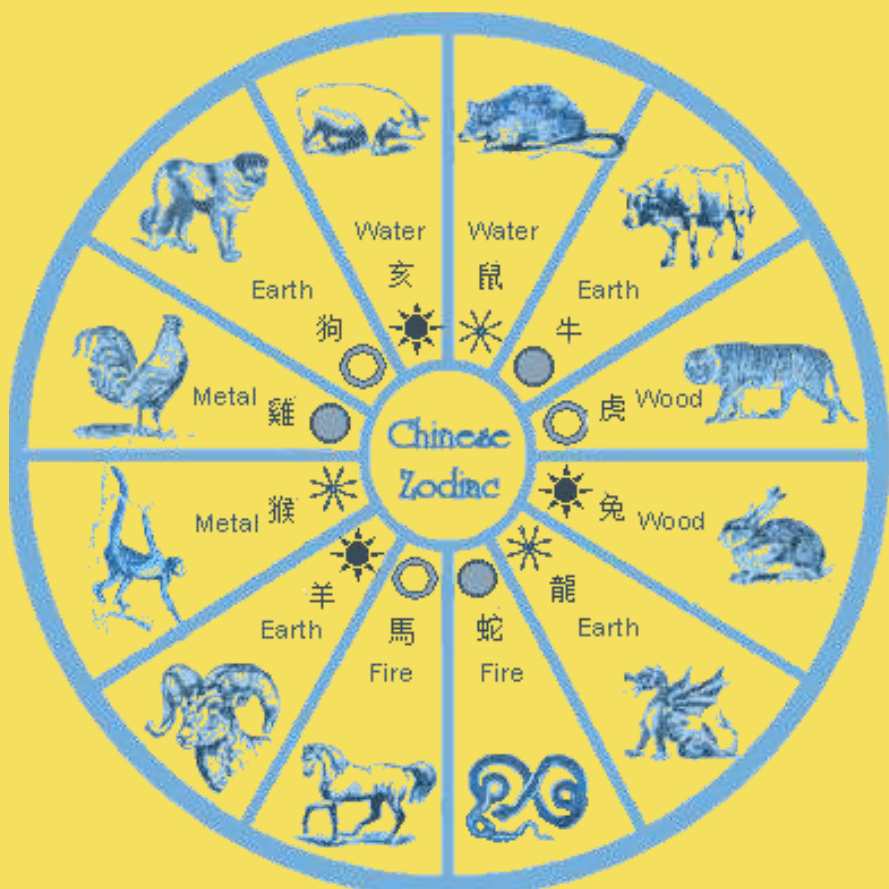
The Gregorian calendar uses the idea of leap years to fix this problem. Once every four years, one extra day is added to the calendar as the 29th day of February.



But there are many other types of calendars around the world.

Not all of them use leap years. Try to figure out how they fix this issue.

CHINESE CALENDAR



LUNAR CALENDAR

Enero	Febrero	Marzo	Abril	Mayo	Junio	Julio	Agosto	Septiembre	Octubre	Noviembre	Diciembre
5 JUEVES - 1937 - Cetus	4 SABADO - 1942 - Aries	5 DOMINGO - 1946 - Tauro	3 LUNES - 1827 - Gemini	3 MIÉRCOLES - 2030 - Cancer	1 JUEVES - 1226 - Leo	1 SABADO - 0033 - Virgo	7 LUNES - 1823 - Capricornio	6 MIÉRCOLES - 0646 - Acuario	5 JUEVES - 1833 - Cetus	4 SABADO - 0916 - Aries	3 DOMINGO - 1607 - Tauro
12 JUEVES - 1201 - Gemini	11 SABADO - 0046 - Leo	12 DOMINGO - 1437 - Virgo	11 MARTES - 0937 - Virgo	10 MIÉRCOLES - 2134 - Libra	9 VIERNES - 1334 - Ophiuchus	9 DOMINGO - 0440 - Sagittario	15 MARTES - 0130 - Tauro	13 MIÉRCOLES - 0639 - Tauro	12 JUEVES - 1241 - Gemini	10 VIERNES - 2054 - Leo	10 DOMINGO - 0209 - Leo
19 JUEVES - 2234 - Virgo	18 SABADO - 1934 - Libra	20 LUNES - 1639 - Capricornio	19 MIÉRCOLES - 3016 - Sagittario	19 VIERNES - 0031 - Acuario	17 SABADO - 1149 - Pices	16 DOMINGO - 1949 - Pices	21 LUNES - 1128 - Leo	20 MIÉRCOLES - 0904 - Virgo	19 JUEVES - 1849 - Virgo	18 SABADO - 1132 - Libra	18 LUNES - 0704 - Capricornio
28 SABADO - 0031 - Capricornio	26 DOMINGO - 1450 - Acuario	28 MARTES - 0234 - Cetus	26 MIÉRCOLES - 1106 - Cetus	25 JUEVES - 1932 - Tauro	24 SABADO - 0259 - Orión	23 DOMINGO - 3007 - Cancer	29 MARTES - 0703 - Scorpio	28 JUEVES - 0233 - Sagittario	28 VIERNES - 2202 - Capricornio	26 DOMINGO - 1643 - Acuario	26 MARTES - 0902 - Pices